

# Central Valley Flood Protection Board Update

September 23, 2016

Presented by:

Mike Mierzwa, P.E.

Michael.Mierzwa@water.ca.gov

Mary J. Jimenez, P.E., PMP

Mary.Jimenez@water.ca.gov

Christopher Williams, P.E.

Christopher.Williams@water.ca.gov

# Today's Discussion

## CVFPP Schedule Update

### Where We've Been

- CVFPP State Systemwide Investment Approach Refinements

### Where We Are

- State Systemwide Investment Approach (SSIA) Range of Investments Over Time

### Where We're Going

- Draft Flood Policy Issues

# CVFPP Schedule/Progress Update

## Refinements and stakeholder outreach ongoing

- RFMP meetings
- Monthly Coordinating Committee, CVFPB meetings
- Stakeholder interest meetings (Ag, NGOs, etc.)

## Key Dates

- October 7: Director's Briefing
- October 31: Working Draft to CVFPB and stakeholders
- December: Public Draft

# Where We've Been

## CVFPP State Systemwide Investment Approach Refinements

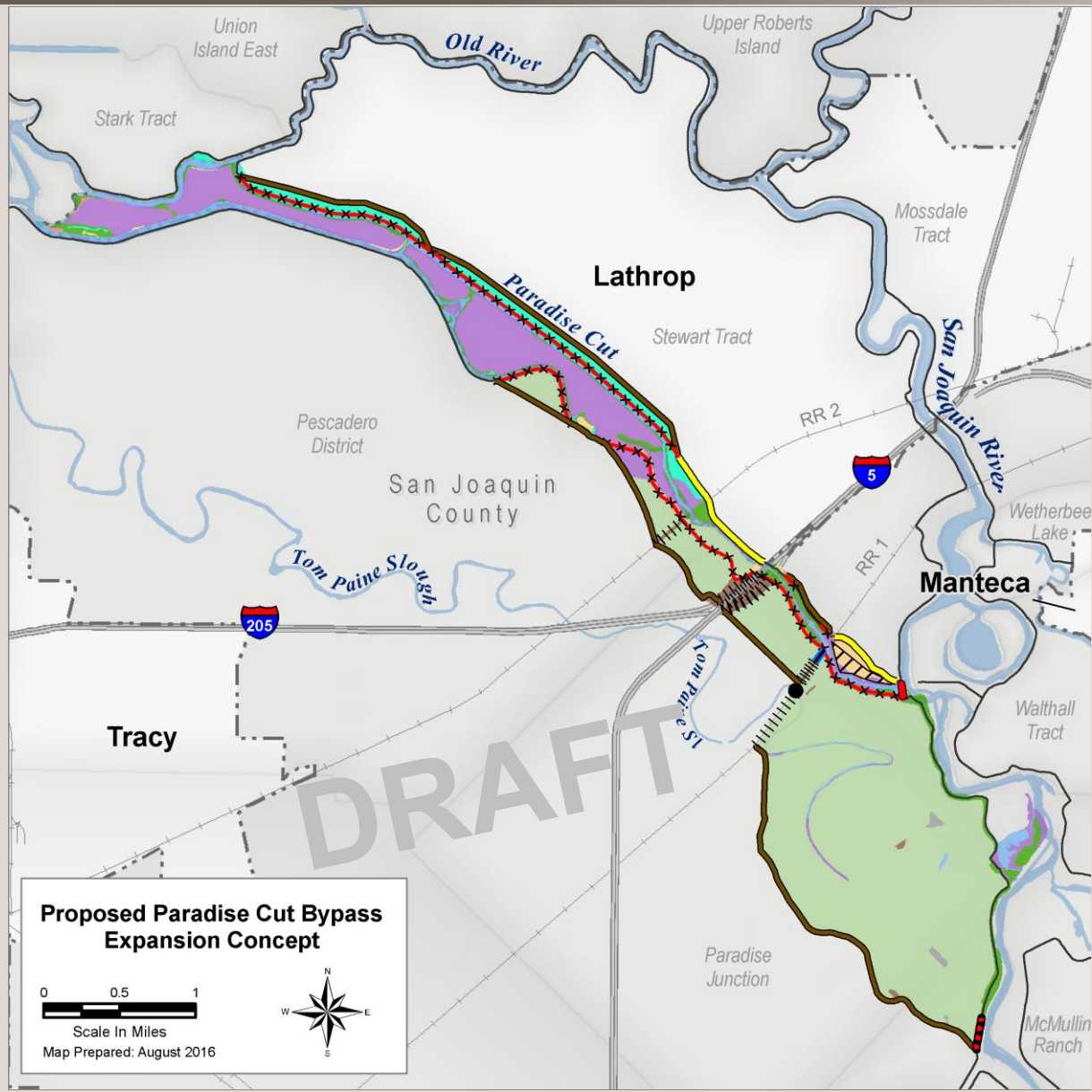


# 2017 Refinements to SSIA

2012 SSIA		2017 SSIA Refinements	
Flood Management Element	Project Location or Required Components	Management Action Categories Used in 2017 CVFPP	Summary of Refinements in 2017 CVFPP Update
<b><i>Urban: Capital Improvements</i></b>			
Target 200-year Level of Protection	Selected projects developed by local agencies, State, federal partners	Levee Improvements; Other Infrastructure Improvements	Potential urban improvements updated considering implementation progress for State-federal projects during last 5 years and recommendations of RFMPs
Non-SPFC Urban Levee Improvements	Includes approximately 120 miles of non-SPFC levees that are closely associated with SPFC urban levees. Performance of these non-SPFC levees may affect the performance of SPFC levees		

*Table 3-3 Refinements to Physical and Operational Elements in the State Systemwide Investment Approach, 2017 Update to the CVFPP*

# Proposed Paradise Cut Expansion



# Where We Are

## State Systemwide Investment Approach (SSIA) Range of Investments Over Time

# Comparative Investment by DWR Program

Total Program Investment (State, Local, and Federal Investment)

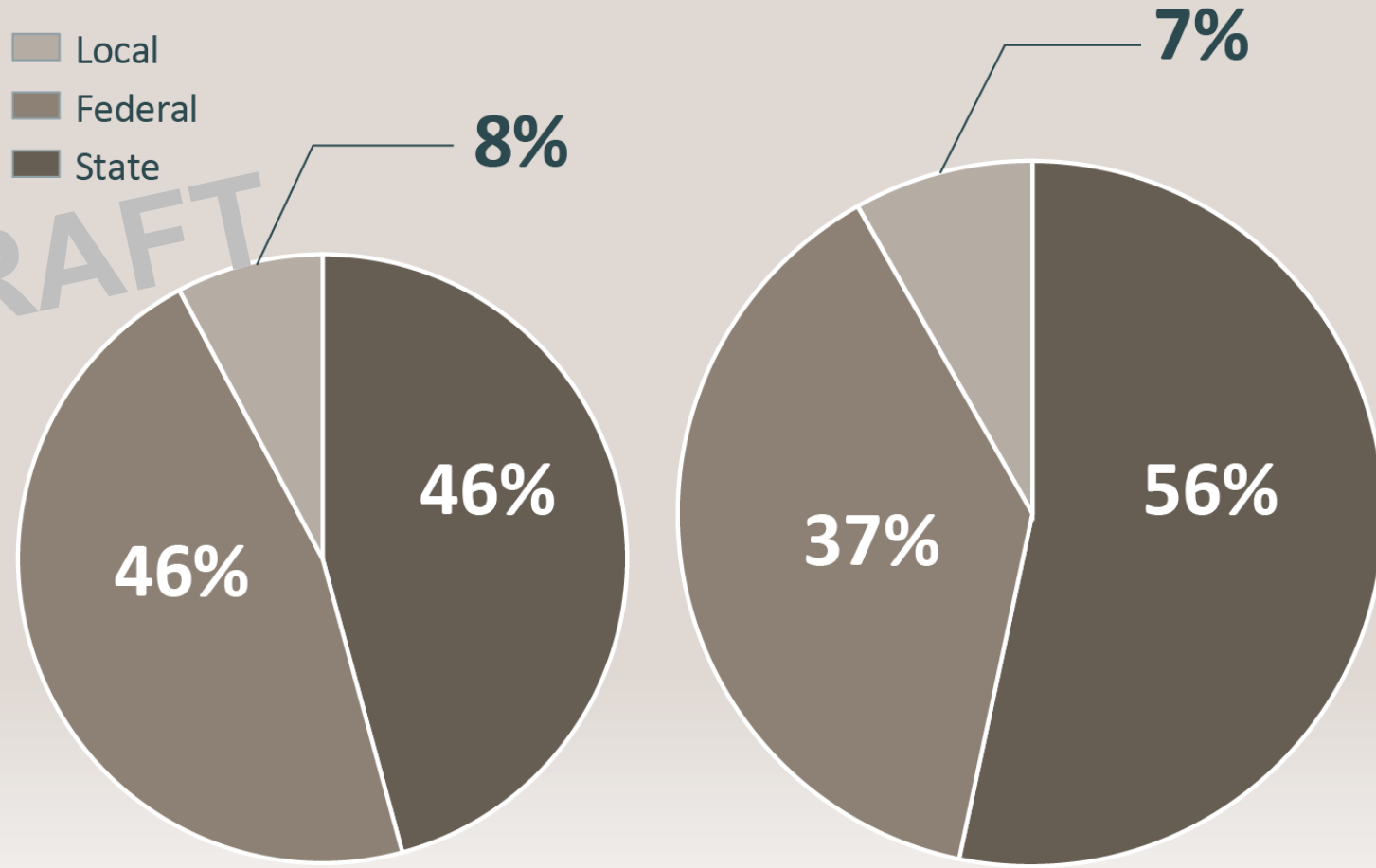
Flood Management Implementation Program	2012 Total CVFPP Investment Estimate <sup>1</sup>		2017 Total CVFPP Investment Estimate	
	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)
Flood Management Planning	\$1,890	\$2,300	\$780	\$960
Floodplain Risk Management	\$600	\$800	\$1,000	\$1,230
Flood Risk Reduction Projects	\$10,520	\$12,740	\$13,750	\$16,800
Flood System O&M	\$440	\$560	\$1,470	\$1,790
Flood Emergency Response	\$480	\$510	\$490	\$610
<b>Total</b>	<b>\$13,920</b>	<b>\$16,910</b>	<b>\$17,490</b>	<b>\$21,390</b>

Note:<sup>1</sup>From Table 4.3 in the 2012 CVFPP

DRAFT



# 2012 and 2017 Cost Share Comparisons



# State Investment Over Time by DWR Program

Flood Management Programs	Phase 1		Phase 2		Phase 3		Total	
	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)	Low (\$M)	High (\$M)
Flood Emergency Response	\$20	\$30	\$40	\$50	\$200	\$240	\$260	\$320
Flood System O&M	\$140	\$180	\$170	\$200	\$470	\$570	\$780	\$950
Floodplain Risk Management	\$120	\$140	\$120	\$140	\$50	\$80	\$290	\$360
Flood Management Planning	\$90	\$110	\$130	\$160	\$430	\$530	\$650	\$800
Flood Risk Reduction Projects	\$1,340	\$1,630	\$1,660	\$2,030	\$3,090	\$3,770	\$6,090	\$7,430
Total	\$1,710	\$2,090	\$2,120	\$2,580	\$4,240	\$5,190	\$8,070	\$9,860

DRAFT

# Investment Types by Area of Interest: Systemwide

<b><i>Systemwide</i></b>		
<b>Capital Investment</b>	<b>Total Estimated Cost Low (\$M)</b>	<b>Total Estimated Cost High (\$M)</b>
Yolo Bypass Multi-benefit Improvements	\$1,580	\$1,930
Feather River-Sutter Bypass Multi-benefit Improvements	\$600	\$2,300
Paradise Cut Multi-benefit Improvements	\$280	\$340
Reservoir & Floodplain Storage	\$750	\$900
<b>Ongoing Investment – Annual Amount</b>		
State Operations, Planning and Performance Tracking	\$41	\$51
Emergency Management	\$22	\$27
Reservoir Operations	\$13	\$15
<b>Routine Maintenance</b>	<b>Under Development</b>	

DRAFT

# Investment Types by Area of Interest: Urban

## *Urban*

Capital Investment	Total Estimated Cost Low (\$M)	Total Estimated Cost High (\$M)
Levee Improvements	\$3,940	\$4,820
Other Infrastructure and Habitat Improvements	\$410	\$510
Ongoing Investment – Annual Amount		
Risk Awareness, Floodproofing, and Land Use Planning	\$12	\$14
Studies and Analysis	\$1	\$2
Routine Maintenance	\$15	\$18

DRAFT

# Investment Types by Area of Interest: Rural

## *Rural*

Capital Investment	Total Estimated Cost Low (\$M)	Total Estimated Cost High (\$M)
Levee and Infrastructure Improvements	\$2,550	\$3,110
Setbacks, Bypasses, and Floodplain Storage	\$170	\$210
Land Acquisitions and Easements	\$770	\$930
Habitat Restoration/Reconnection	\$260	\$310
Ongoing Investment – Annual Amount		
Risk Awareness, Floodproofing, and Land Use Planning	\$4	\$6
Studies and Analysis	\$1	\$1
Routine Maintenance	\$51	\$62

DRAFT

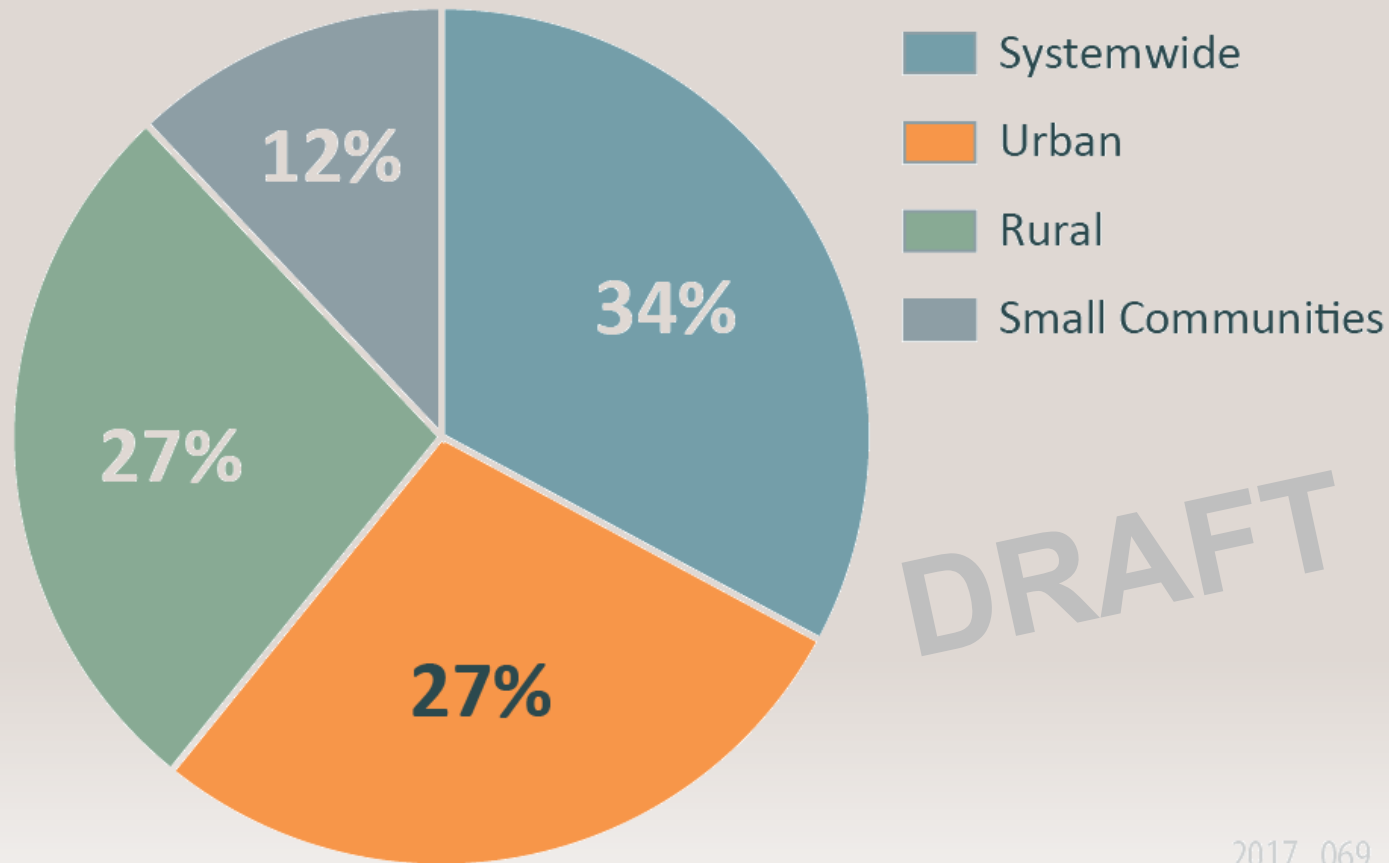
# Investment Types by Area of Interest: Small Community

## *Small Community*

Capital Investment	Total Estimated Cost Low (\$M)	Total Estimated Cost High (\$M)
Levee and Infrastructure Improvements	\$950	\$1,160
Setbacks, Land Acquisitions, and Habitat Restoration	\$620	\$760
Ongoing Investment – Annual Amount		
Risk Awareness, Floodproofing, and Land Use Planning	\$10	\$12
Studies and Analysis	\$10	\$12
Routine Maintenance	\$14	\$17

DRAFT

# CVFPP Investments Spread Across Areas of Interest



2017\_069

# Where We're Going

## Draft Flood Policy Issues



# DRAFT Flood Policy Issues



## Land Use & Floodplain Management

Ongoing and planned development in the floodplain continues to intensify flood risk.



## Residual Risk Management

Flood risk can be reduced, not eliminated, but commitment to enhanced resilience and public awareness falls short in many areas.



## Hydraulic and Ecosystem Baselines and Program Phasing

Current regulatory practices hinder the ability to obtain credits for benefits of improvements made early in a long-term program to offset impacts that may occur later in the program, complicating phased implementation of CVFPP structural improvements.



## Operations and Maintenance of the Flood System

Underfunding and complex, time-consuming permits lead to a backlog of deferred maintenance and greater risk to life and property.

# DRAFT Flood Policy Issues



## **Multi-Benefit Projects**

Ineffective institutional frameworks have hindered implementation of multi-benefit actions.



## **Governance & Institutional Support**

Overlapping authorities and conflicting mandates have placed flood managers in untenable positions.



## **Coordination with Federal Agencies**

Federal agencies share responsibility for flood management, but complicated coordination, policies, funding, and approvals slow progress.



## **Finance**

Insufficient and unstable flood management funding has led to delayed investment and greater risk to life and property.

# Central Valley Flood Protection Board Update

September 23, 2016

Presented by:

Mike Mierzwa, P.E.

Michael.Mierzwa@water.ca.gov

Mary J. Jimenez, P.E., PMP

Mary.Jimenez@water.ca.gov

Chris Williams, P.E.

Christopher.Williams@water.ca.gov